UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *08-21-08*.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-39* is/are pending in the application.
    4a) Of the above claim(s) *27-39* is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-26* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *6/4/2008*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

DETAILED ACTION

Information Disclosure Statement

1.   The information disclosure statement (IDS) submitted on 6/4/2008 was filed after the

mailing date of the non-final Office action on 5/28/2008. The submission is in compliance with

the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being

considered by the examiner.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action: A person shall be entitled to a

patent unless –(e) the invention was described in (1) an application for patent, published under section 122(b), by another
        filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application
        for patent by another filed in the United States before the invention by the applicant for patent, except that an
        international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
        subsection of an application filed in the United States only if the international application designated the United
        States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 14 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Liu

(20040203762).

        Regarding claim 14 Liu teaches a method of enabling channel scanning in a wireless

station, said method comprising (figs. 1-7):

        determining if a channel of a plurality of available channels is a domain-independent (ad-

hoc network, IBSS) channel (para. # 0016-0017); and actively scanning the domain-independent

channel (para. # 0017-0018).

        Regarding claim 16 Liu teaches further comprising performing an active channel scan if

valid regulatory domain information is identified during scan of the domain-independent channel

(para. 0018-0020).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   Claims 1-13 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li

(20040127240) in view of Comp (20040203698).

Regarding claim 1 Li teaches a method of enabling channel scanning in a wireless station

(clients), said method comprising (figs. 1-7):

receiving from an access point (AP1 and AP2) data related to a possibility of regulatory

domain change (para. # 0047-0048, 0052-0055, 0063, 0073-0075); and

selecting a channel scanning method based upon said data (when a client product has a

set regulatory domain, but can confirm or change such regulatory domain based on other

information elements it receives) (para. # 0018, 0073-0075, fig, 7). Li also teaches the client

product can passively scan all frequencies at a predetermined time interval. The client product,

the predetermined interval can be between 150 ms, which can be doubled during successive

scans. According to the 802.11 standard, an AP must send out its lid beacon at least every 2

seconds.

Li does not specifically teach after the connection with the access point is terminated.

In an analogous art, Comp teaches after the connection with the access point is terminated

(para. # 0021-0025). Therefore, it would have been obvious to one of ordinary skill in the art at

the time the invention was made to modify the device of Li teaches by specifically adding

features after the connection with the access point is terminated in order to notification of loss of

network connection to user is reliably performed, thus enabling user to take appropriate action

taught by Comp.

Regarding claim 2 Li teaches wherein said data indicates whether there is a possibility of

domain change (para. # 0055, 0063, 0073-0075).

Regarding claim 3 Li teaches wherein said data is based on geographic information of the

access point (para. # 0047-0048, 0073-0075).

Regarding claim 4 Li teaches wherein said data is based on proximity information of the

access point related to a predetermined point (para. # 0047-0048, 0052-0055, 0063, 0073-0075).

Regarding claim 5 Li teaches wherein said data is based on maximum coverage area and

geographical information of the access point (para. # 0047-0048, 0052-0055, 0063, 0073-0075).

Regarding claim 6 Li teaches wherein said selecting a channel scanning method

comprises selecting a safe channel scanning method if there is a possibility of regulatory domain

change (para. # 0047-0048, 0052-0055, 0063, 0073-0075).

Regarding claim 7 Li teaches wherein said selecting a channel scanning method

comprises selecting an active channel scanning method if there is no possibility of regulatory

domain change (para. # 0047-0048, 0052-0055, 0063, 0073-0075).

Regarding claim 8 Li teaches a method of enabling channel scanning in a wireless

station, said method comprising (figs. 1-7):

establishing communication between said wireless station and an access point (para. #

0047-0048,0052-0055,0063,0073-0075); receiving information in which regulatory domain

information expires after the communication between said wireless station and said access point

(para. # 0047-0048, 0052-0055, 0063, 0073-0075). Li also teaches the client product can

passively scan all frequencies at a predetermined time interval. The client product, the

predetermined interval can be between 150 ms, which can be doubled during successive scans.

According to the 802.11 standard, an AP must send out its lid beacon at least every 2 seconds.

Li does not specifically teach determining whether an period of time after the

communication between said wireless station and said access point has been lost is greater than

the period of time in said lifetime field.

In an analogous art, Comp teaches determining whether an period of time after the

communication between said wireless station and said access point has been lost is greater than

the period of time in said lifetime field (para. # 0021-0025). Therefore, it would have been

obvious to one of ordinary skill in the art at the time the invention was made to modify the

device of Li teaches by specifically adding features determining whether an period of time after

the communication between said wireless station and said access point has been lost is greater

than the period of time in said lifetime field in order to notification of loss of network connection

to user is reliably performed, thus enabling user to take appropriate action taught by Comp.

Regarding claim 9 Li teaches wherein said receiving information comprises obtaining the

shortest distance from a regulatory domain boundary to an edge of the coverage area of the

access point (para. # 0047-0048, 0052-0055, 0063, 0073-0075).

Regarding claim 10 Li teaches further comprising obtaining a speed of said wireless

station (para. # 0047-0048, 0052-0055, 0063, 0073-0075).

Regarding claim 11 Li teaches further comprising selecting a safe channel scanning method if the elapsed period of time is greater than the period of time in said lifetime field (para. # 0047-0048, 0052-0055, 0063, 0073-0075, see claim 8).

Regarding claim 12 Li teaches further comprising determining whether there is a possibility of regulatory domain change (para. # 0063, 0073-0075).

Regarding claim 13 Li teaches further comprising performing safe channel scanning if there is a possibility of regulatory domain change (para. # 0047-0048, 0052-0055, 0063, 0073-0075).

Regarding claim 17 Li teaches a wireless station which scans for channels in a wireless communication network, said wireless station comprising (figs. 1-7):

a receiver for receiving a data block, wherein said data block comprises a regulatory domain change (para. # 0047-0048,0052-0055,0063,0073-0075); a controller coupled to said receiver, said controller selecting a channel scanning method based upon data in said domain change (para. # 0047-0048, 0052-0055, 0063, 0073-0075); and a transmitter coupled to said controller (para. # 0047-0048, 0052-0055, 0063, 0073-0075). Li also teaches the client product can passively scan all frequencies at a predetermined time interval. The client product, the predetermined interval can be between 150 ms, which can be doubled during successive scans. According to the 802.11 standard, an AP must send out its lid beacon at least every 2 seconds.

Li does not specifically teach pre-alert field.

In an analogous art, Comp teaches pre-alert field (para. # 0021-0025). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Li teaches by pre-alert field in order to notification of loss of network

connection to user is reliably performed, thus enabling user to take appropriate action taught by

Comp.

Regarding claim 18 Li teaches wherein said domain change pre-alert field comprises a bit

indicating whether there is a possibility of regulatory domain change (para. # 0047-0048, 0052-

0055, 0063, 0073-0075).

Regarding claim 19 Li teaches wherein the transmitter transmits a probe frame if said

regulatory domain change pre-alert field is not set (para. # 0047-0048, 0052-0055, 0063, 0073-

0075, see claim 17).

Regarding claim 20 Li teaches wherein said domain change pre-alert field is sent in a

beacon frame (para. # 0047-0048, 0052-0055, 0063, 0073-0075, see claim 17).

Regarding claim 21 Li teaches wherein said domain change pre-alert field is sent in a

probe response frame (para. # 0047-0048, 0052-0055, 0063, 0073-0075).

5.   Claims 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Comp

(20040203698) in view of Li (20040127240).

Regarding claim 22 Comp teaches a wireless station which scans for channels in a

wireless communication network, said wireless station comprising (figs. 1-5):

a receiver for receiving a data block, wherein said data block comprises a lifetime field

related to the extent of a domain (para. # 0021-0022); a controller (56) coupled to said receiver

(50), said controller selecting a channel scanning method based upon data in said lifetime field;

and a transmitter coupled to said controller (para. # 0021-0022).

Comp does not specifically teach regulatory domain.

In an analogous art, Li teaches regulatory domain (para. # 0073-0075). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Comp teaches by regulatory domain in order to advantageously conform to any regulatory domain environment, thereby allowing the client to operate permissibly in any wireless network taught by Li.

Regarding claim 23 Li teaches wherein the controller selects a safe channel scan method if said lifetime field has expired (para. # 0047-0048, 0052-0055, 0063, 0073-0075, see claim 22).

Regarding claim 24 Li teaches wherein said lifetime field is based upon a maximum handover time (para. # 0047-0048, 0052-0055, 0063, 0073-0075, see claim 22).

Regarding claim 25 Li teaches wherein said lifetime field is based on a shortest distance from a regulatory domain boundary to an edge of the coverage area of an access point (para. # 0047-0048, 0052-0055, 0063, 0073-0075, see claim 22).

Regarding claim 26 Li teaches wherein said lifetime field is based upon a maximum speed of said wireless station (para. # 0047-0048, 0052-0055, 0063, 0073-0075, see claim 22).

6.   Claims 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu (20040203762) in view of Comp (20040203698).

Regarding claim 15 Liu does not specifically teach further comprising receiving a pre-alert field. In an analogous art, Comp teaches pre-alert field (para. # 0021-0025). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Liu teaches by pre-alert field in order to notification of loss of network connection to user is reliably performed, thus enabling user to take appropriate action taught by Comp.

Response to Arguments

7.   Applicant's arguments with respect to claims 1-26 have been considered but are moot in

view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to KHAWAR IQBAL whose telephone number is (571)272-7909.

The examiner can normally be reached on 9 am to 6.30 pm Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, GEORGE ENG can be reached on 571-272-7495. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Eng/   Khawar Iqbal
Supervisory Patent Examiner, Art Unit 2617   Examiner
                                                           Art Unit 2617